

REMARKS

Claims 1-21 are pending in the application. Claims 2, 3, 6-7, and 20 have been withdrawn from consideration. Claims 1, 5, 16, 18 and 21 have been amended.

Applicants wish to thank the Examiner for the indication of allowance of claims 10-15 and 17.

In the Office Action, claims 18 and 19 were rejected under 35 U.S.C. §112, first and second paragraphs, because the Examiner contends that the recitations in independent claim 18 of “an F end face” and “end face accuracy is at most 30 μm ” are not adequately supported in the specification. Regarding the “end face accuracy” recitation, Applicants point out that the recited end face accuracy, and a method of deriving it, is described in exacting detail at page 35, lines 22-32 of the present application. The recited end face accuracy is described such that one skilled in the art would have been able to make the claimed invention. Therefore, this limitation of claim 18 meets the requirements of §112, first and second paragraphs.

Regarding the “F end face” recitation, this term is defined at page 3, Table 3 of the “JIS Specification for Rollers for Roller Bearings” submitted with Applicants’ October 27, 2005 Response. Furthermore, even if “F end face” is not considered a standard term in U.S. practice as contended by the Examiner, this is irrelevant because “F end face” is defined and described in the present application at page 35, lines 17-21 and at Fig. 12. Note that Fig. 12 contains, *inter alia*, the same information regarding “F end face” as page 3, Table 3 of the JIS Specification. Given the description in the application, and/or given the published JIS Specification, one skilled in the art would have been able to make the claimed invention, and so this limitation of claim 18 meets the requirements of §112, first and second paragraphs.

The Examiner contends “documentary evidence” that end face accuracy and F end face are standard and definite terms in the U.S. is required. However, the Examiner is incorrect. It is well-established that an applicant can be their own lexicographer, using whatever terms they choose, as long as any special meaning assigned to a term is clearly set forth in the specification. See, MPEP §2173.01. In the present case, the terms “end face accuracy” and “F end face” are defined in detail in the application, and so the boundaries of the claimed subject matter are clear, and one skilled in the art would be able to make the claimed invention.

Thus, the rejection of claims 18 and 19 under §112, first and second paragraphs is improper and should be withdrawn.

Claim 21 was rejected under 35 U.S.C. §112, first and second paragraphs, but the Examiner states no basis for rejecting claim 21 under §112, and no such basis exists. Claim 21 is fully supported, for example, at page 24, line 24 et seq. of the present application, and is perfectly clear. Therefore, the rejection of claim 21 under §112 is improper and should be withdrawn.

It is further contended that claim 21 reads on a nonelected species. However, claim 21 does not read on a nonelected species, because it does not recite the features indicated by the Examiner to constitute a different species in the election of species requirement. In particular, it does not recite a roller holding portion constituted of a plurality of roller holding portions (as shown in Figs. 4C and 4D of the application), or multiple rows of roller bearings (as shown as reference numerals 2a, 2b in Figs. 2A-8C of the application). Moreover, claim 21 is analogous to elected claim 16 except for the recitation of fastening of the upper and lower members being by spot welding rather than by caulking. Thus, claim 21 reads on the elected species. Still further, claim 21 has been fully examined in this Office Action, since it was rejected under

§§112 and 103, as discussed herein below. By examining and rejecting the claim, the Examiner has indicated that he considers it to be directed to an elected species.

Claims 1, 5 and 18-19 have been rejected under 35 U.S.C. § 102 as being anticipated by previously cited Japanese Patent Document 5-272529 (Japan). Claims 16 and 21 have been rejected under 35 U.S.C. § 103 as being unpatentable over U. S. Patent 6,431,761 (Yamaguchi) in view of official notice of common knowledge in the art, or, in the alternative, engineering design choice. Claims 4, 8, and 9 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Japan as set forth in the rejection of claims 1, 5, and 18-19, and in further view of previously cited British Patent 444,292 (GB). These rejections are respectfully traversed. Applicants hereby request reconsideration and allowance of the claims in view of the following arguments.

Regarding the anticipation rejection of independent claims 1, 5, and 18 based on Japan, these claims have been amended to recite that the cage for holding the rollers has an upper member and a lower member for sandwiching the rollers between them, the upper member and the lower member are subjected to caulking, and are fixed to each other at a radially inner end portion and a radially outer end portion of each of them. Claims 1, 5 and 18 have been further amended to recite that a flat portion having a height less than that of the recited roller holding portions, measured in a cross-section perpendicular to a plane along which the cage extends, is provided between the radially inner and outer end portions of the cage and an end portion of each roller. These claims have also been amended to recite that the roller holding portions each have a length in a radial direction less than a length of each of the rollers, and the pockets extend to the flat portion. These amendments are supported, for example, at Figs. 2A-2E of the present

application and the accompanying description at page 14, line 27 to page 16, line 32 of the present application.

The above-described features of amended claims 1, 5, and 18 enable improved oil circulation to the inside of the cage. In particular, the arrangement of the recited flat portion of the cage and the relative length of the roller holding portion serve to improve oil passage at the end portions, because the end portions of the pockets are implemented as the flat portion. Consequently, sufficient lubricant can be supplied to the space between the rollers and the cage. The cited Japan reference does not teach or even suggest any of the added features of amended claims 1, 5 or 18.

Japan does not anticipate amended independent claims 1, 5 and 18, because it does not disclose each and every element of those claims. In particular, Japan does not disclose a cage having an upper member and a lower member for sandwiching rollers between them, the upper member and the lower member subjected to caulking and fixed to each other at a radially inner end portion and a radially outer end portion of each of them. Furthermore, Japan does not disclose a cage with a flat portion, having a height less than that of its roller holding portions, disposed between the radially inner and outer end portions of the cage and an end portion of each roller. Still further, Japan does not disclose roller holding portions each having a length in a radial direction less than a length of its rollers, and pockets extending to the flat portion. Moreover, it would not have been obvious to add these features to Japan.

Consequently, independent claims 1, 5 and 18 are patentable, as is claim 19, which depends from claim 18.

Regarding the obviousness rejections of dependent claims 4, 8 and 9 based on Japan and GB, or Japan and common knowledge in the art or engineering design choice, neither the GB

reference nor common knowledge discloses the above-discussed features of amended independent claims 1 and 5, from which claims 4, 8 and 9 depend, missing from Japan. Therefore, any combination of Japan and GB or Japan and common knowledge would still be missing these important claimed features, and it would not have been obvious to add these features to any Japan/GB or Japan/common knowledge or Japan/engineering design choice combination to yield the inventions of claim 4, 8 or 9.

Consequently, claims 4, 8 and 9 are patentable.

Regarding the obviousness rejection of independent claims 16 and 21 based on Yamaguchi and common knowledge in the art or engineering design choice, these claims have been amended to recite the upper member and the lower member of the cage each have a pocket for accommodating a roller, a roller holding portion, and a flat portion having a height less than that of their respective roller holding portions, measured in a cross-section perpendicular to a plane along which the cage extends, between inner and outer radial end portions of the member and an end portion of the roller. Claims 16 and 21 have been further amended to recite that the roller holding portions have a length in a radial direction less than a length of the roller, and the pockets extend to the flat portion.

The above-described features of amended claims 16 and 21 enable improved oil passage at the end portions, because the end portions of the pockets are implemented as the flat portion. Consequently, sufficient lubricant can be supplied to the space between the rollers and the cage. The cited Yamaguchi reference does not teach or even suggest any of the added features of amended claims 16 and 21, and these features are not found in the common knowledge in the art, and do not constitute engineering design choice.

Since neither Yamaguchi nor common knowledge in the art teaches or suggests the above-discussed added features of amended claims 16 and 21, any combination of Yamaguchi and the common knowledge in the art or engineering design choice would still be missing these features, and it would not have been obvious to add these features to Yamaguchi to yield the inventions of claims 16 and 21.

Consequently, amended claims 16 and 21 are patentable.

Accordingly, it is believed that all pending claims are now in condition for allowance. Applicants therefore respectfully requests an early and favorable reconsideration and allowance of this application. If there are any outstanding issues which might be resolved by an interview or an Examiner's amendment, the Examiner is invited to call Applicants' representative at the telephone number shown below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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